Dataset Expocode	**74JC20130226**
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Dataset	**Funding Info:** European Commission (CARBOCHANGE, grant no 264879) **Initial Submission (yyyymmdd):** 20140711 **Revised Submission (yyyymmdd):** 20160128
Campaign/Cruise	**Expocode:** 74JC20130226 **Campaign/Cruise Name:** FI_BI_HALLEY_FI_2013 **Campaign/Cruise Info:** FI_BI_HALLEY_FI_2013 **Platform Type:** **CO2 Instrument Type:** Equilibrator-IR or CRDS or GC **Survey Type:** Research Cruise **Vessel Name:** James Clark Ross **Vessel Owner:** UK-Natural Environment Research Council **Vessel Code:** 74JC
Coverage	**Start Date (yyyymmdd):** 20130226 **End Date (yyyymmdd):** 20130313 **Westernmost Longitude:** 57.75244 W **Easternmost Longitude:** 19.99435 W **Northernmost Latitude:** 52.21011 S **Southernmost Latitude:** 72.8728 S **Port of Call:** Stanley, Falkland Islands
Variable	**Name:** xCO2_equ[umol/mol] **Unit:** micro-mol/mol **Description:** CO2 mixing ratio measured at Tequ (wet)
Variable	**Name:** Patm [hPa] **Unit:** hecta-Pascal **Description:** Atmospheric Pressure
Variable	**Name:** Tequ [deg.C] **Unit:** degrees Celsius **Description:** Temperature in Equilibrator
Variable	**Name:** SST [deg.C] **Unit:** degrees Celsius **Description:** Sea Surface Temperature (at intake depth=6m)

Variable	**Name:** Sal **Unit:** unitless or PSU **Description:** Salinity
Variable	**Name:** pCO2_sw[uatm] **Unit:** micro-atm **Description:** Seawater partial pressure of CO2 at SST (wet)
Variable	**Name:** pCO2_atm[uatm] **Unit:** micro-atm **Description:** Atmospheric partial pressure of CO2 (wet)
Variable	**Name:** fCO2_sw[uatm] **Unit:** micro-atm **Description:** Seawater fugacity of CO2 at SST (wet)
Variable	**Name:** fCO2_atm[uatm] **Unit:** micro-atm **Description:**
Variable	**Name:** xCO2atm_dry[umol/mol] **Unit:** micro-mol/mol **Description:**
Variable	**Name:** Pequ [hPa] **Unit:** hecta-Pascal **Description:** Equilibration Pressure
Sea Surface Temperature	**Location:** Adjacent to intake at 6 m depth **Manufacturer:** SeaBird Electronics **Model:** SBE45 **Accuracy:** 0.001 (°C if units not given) **Precision:** 0.001 (°C if units not given) **Calibration:** Recorded and kept by British Antarctic Survey Polar Data Centre (https://www.bas.ac.uk/team/business-teams/information-services/polar-data-centre/) **Comments:**
Sea Surface Salinity	**Location:** Adjacent to intake at 6 m depth **Manufacturer:** SeaBird Electronics **Model:** SBE45 **Accuracy:** 0.002 **Precision:** 0.002 **Calibration:** Recorded and kept by British Antarctic Survey Polar Data Centre (https://www.bas.ac.uk/team/business-teams/information-services/polar-data-centre/) **Comments:**
Atmospheric Pressure	**Location:** Met-platform on deck above bridge, 18 m asl **Normalized to Sea Level:** yes **Manufacturer:** Vaisala **Model:** PTB110 barometer **Accuracy:** 1 hPa (hPa if units not given) **Precision:** 1 hPa (hPa if units not given) **Calibration:** Recorded by National Marine Facilities Sea Systems and kept by British Oceanographic Data Centre (www.bodc.ac.uk) **Comments:**

Atmospheric CO2	**Measured/Frequency:** yes, circa every 20 minutes **Intake Location:** Met-platform on deck above bridge, 18 m asl **Drying Method:** **Atmospheric CO2 Accuracy:** <2 micro-atm fCO2 **Atmospheric CO2 Precision:** <0.5 micro-atm fCO2
Aqueous CO2 Equilibrator Design	**System Manufacturer:** **Intake Depth:** 6 m **Intake Location:** Hull **Equilibration Type:** Headspace (vented) **Equilibrator Volume (L):** 2.5 **Headspace Gas Flow Rate (ml/min):** 200 **Equilibrator Water Flow Rate (L/min):** 1.6 **Equilibrator Vented:** Yes **Equilibration Comments:** **Drying Method:** Peltier drier to <20% humidity
Aqueous CO2 Sensor Details	**Measurement Method:** IR **Method details:** Non Dispersive IR Sensor **Manufacturer:** LICOR **Model:** LI-840 **Measured CO2 Values:** xCO2 dry(wet) **Measurement Frequency:** Every 20 minutes **Aqueous CO2 Accuracy:** <2 micro-atm fCO2 **Aqueous CO2 Precision:** <0.5 micro-atm fCO2 **Sensor Calibrations:** Sensor calibration during deployment using 3 gas standards (nominally 250; 380 and 450 ppmv CO2 in synthetic air) **Calibration of Calibration Gases:** Ship **Number Non-Zero Gas Standards:** 3 **Calibration Gases:** BOC gases Ltd., nominally 250; 380 and 450 ppmv CO2 in synthetic air **Comparison to Other CO2 Analyses:** **Comments:** **Method Reference:** Ribas-Ribas et al. 2014. Intercomparison of carbonate chemistry measurements on a cruise in northwestern European shelf seas. Biogeosciences. 11: 4339-4355
Equilibrator Temperature Sensor	**Location:** Platinum Resistance Thermocouple (PT100) in equilibrator **Manufacturer:** Pico-Technology **Model:** PT100 Class B **Accuracy:** 0.01 (°C if units not given) **Precision:** 0.01 (°C if units not given) **Calibration:** Calibrated prior to cruise (ice-point) **Comments:**
Equilibrator Pressure Sensor	**Location:** In line with equilibrator **Manufacturer:** Druck Gmbh **Model:** PTX7517-3257 **Accuracy:** 0.1 (hPa if units not given) **Precision:** 0.1 (hPa if units not given) **Calibration:** Calibrated annually **Comments:**
Additional Information	**Suggested QC flag from Data Provider:** NA **Additional Comments:**

Citation for this Dataset:
Other References for this Dataset: